

REMARKS

Claims 1-29 are pending in the application. Claims 1, 9, 18, and 21 are independent. By the foregoing Amendment, claim 1 has been amended. These changes are believed to introduce no new matter and their entry is respectfully requested.

Objection to Claim 1

In paragraph 3 of the Office Action, the Examiner objected to claim 1 citing informalities. By the foregoing Amendment, Applicants have amended claim 1 to accommodate the Examiner. Accordingly, Applicants respectfully request that the Examiner reconsider and remove the objection to claim 1.

Rejection of Claims 1-6, 8-13, 15-25, and 27-29 Under 35 U.S.C. §102(b)

In paragraph 5 of the Office Action, the Examiner rejected claims 1-6, 8-13, 15-25, and 27-29 under 35 U.S.C. § 102(b) as being anticipated by “A Technical Introduction to PCI-Based RS/6000 Servers,” 1996 to IBM (hereinafter “IBM”). A claim is anticipated only if each and every element of the claim is found, either expressly or inherently, in a reference. (MPEP §2131 citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628 (Fed. Cir. 1987)). The identical invention must be shown in as complete detail as is contained in the claim. *Id.* citing *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236 (Fed. Cir. 1989)). Applicants respectfully traverse the rejection.

Embodiments of the present invention are directed to a method for atomically updating an original portion of platform firmware data. Representative claims 1 and 18 recite in pertinent part “***atomically*** modifying firmware configuration data in the firmware storage device to indicate the updated firmware data is to be used in place of the existing portion of platform firmware data that is being updated such that ***only the existing*** portion of platform ***firmware*** data ***is valid prior to*** the atomic modification of the firmware configuration data ***and only the updated firmware data is valid after*** the atomic modification to the firmware configuration data” (emphasis added). Thus, according to embodiments of the present invention “[I]n all state change operations described below, all state bits transitions are atomic operations, i.e., the logic level of only one

state bit is changed at a time for a given file state change” (see Applicants’ Specification page 11, lines 4-6.

In the Office Action, the Examiner states that IBM discloses (1) writing updated firmware data that is to replace the existing portion of platform firmware data to a firmware storage device in which the existing portion of firmware data are stored and (2) atomically modifying firmware configuration data in the firmware storage device to indicate the updated firmware data is to be used in place of the existing portion of platform firmware data that is being updated such that only the existing portion of platform firmware data is valid prior to the atomic modification of the firmware configuration data and only the updated firmware data is valid after the atomic modification to the firmware configuration data. Applicants respectfully disagree with the Examiner’s characterization of IBM.

Applicants respectfully submit that IBM fails to show the identical invention as that of claims 1 and 18. For example, IBM fails to teach “***atomically*** modifying firmware configuration data” (emphasis added) as the Examiner asserts. In other words, IBM fails to teach that in all state change operations of its firmware update process the logic level of only one state bit is changed at a time for a given file state change. This teaching is not present in IBM, either expressly or inherently.

IBM also fails to teach “***modifying firmware configuration data*** in the firmware storage device ***to indicate the updated firmware data is to be used in place of the existing portion of platform firmware data***” (emphasis added) as recited in claims 1 and 18. The Examiner asserts that Figure 24 on page 63 of IBM discloses firmware configuration data. Applicants respectfully disagree. IBM provides on page 62 that “Figure 24... shows the components and commands involved with the process of creating the AIX Version 4 boot image.” IBM illustrates on page 53 in Figure 16 that the AIX Boot Image is separate and distinct from the Firmware.

IBM fails to teach “***only the existing*** portion of platform ***firmware*** data ***is valid prior to*** the atomic modification of the firmware configuration data ***and only the updated firmware data is valid after*** the atomic modification to the firmware configuration data” (emphasis added). The

Examiner asserts that “IBM discloses atomically modifying firmware configuration data where firmware data is loaded only onto firmware sectors in the memory.” Applicants respectfully disagree and submit that this interpretation, assuming for the sake of argument that it is correct, is not identical to “*only the existing* portion of platform *firmware* data *is valid prior to* the atomic modification of the firmware configuration data *and only the updated firmware data is valid after* the atomic modification to the firmware configuration data” (emphasis added) as recited in claims 1 and 18.

Because IBM fails to teach each and every element of claims 1 and 18, Applicants respectfully submit that claims 1 and 18 are patentable over IBM. Claims 2-8 properly depend from claim 1 and claims 19-20 properly depend from claim 19. Accordingly, Applicant respectfully submits that claims 2-8 and 19-20 are patentable for at least the same reasons that claims 1 and 18, respectively, are patentable. (MPEP §2143.03 (citing *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988))). Accordingly, Applicant respectfully requests that the Examiner reconsider and remove the rejection to claims 1-6, 8, and 18-20.

Representative claims 9 and 21 recite in pertinent part “*atomically* modifying firmware configuration information in the platform storage device to indicate that the updated firmware files are to be used in place of the existing platform firmware files such that only the existing platform firmware files or only the updated platform firmware files are valid at any point in time during an update” (emphasis added).

Applicants respectfully submit that IBM fails to show the identical invention as that of claims 9 and 21. For example, IBM fails to teach “*atomically* modifying firmware configuration information” (emphasis added) as the Examiner asserts. In other words, IBM fails to teach that in all state change operations of its firmware update process the logic level of only one state bit is changed at a time for a given file state change. This teaching is not present in IBM, either expressly or inherently.

IBM also fails to teach “*modifying* firmware configuration information in the platform storage device *to indicate that the updated firmware files are to be used in place of the existing*

platform firmware files” (emphasis added) as recited in claim 9. The Examiner asserts that Figure 24 on page 63 of IBM discloses firmware configuration data. Applicants respectfully disagree. IBM provides on page 62 that “Figure 24... shows the components and commands involved with the process of creating the AIX Version 4 boot image.” IBM illustrates on page 53 in Figure 16 that the AIX Boot Image is separate and distinct from the Firmware in IBM.

IBM also fails to teach “*only the existing platform firmware files or only the updated platform firmware files are valid at any point in time during an update*” (emphasis added) as recited in claims 9 and 21. The Examiner asserts that Figure 24 on page 63 of IBM discloses firmware configuration data. Applicants respectfully disagree. IBM provides on page 62 that “Figure 24... shows the components and commands involved with the process of creating the AIX Version 4 boot image.” IBM illustrates on page 53 in Figure 16 that the AIX Boot Image is separate and distinct from the Firmware in IBM. In fact, there is no teaching, either expressly or inherently, of the status of existing firmware and updated firmware with respect to time in the update process. Absent such a teaching, Applicants respectfully submit that IBM operates similar to known methods in that prior to rewriting the flash memory the existing data is wiped out and as a result, if a failure occurs in the middle of a rewrite or update, the code in firmware will be corrupt. This position is supported by the warning on page 67 of IBM that a system power-off during firmware update “will result in a corrupted flash.”

Because IBM fails to teach each and every element of claims 9 and 21, Applicants respectfully submit that claims 9 and 21 are patentable over IBM. Claims 10-13 and 15-17 properly depend from claim 9 and claims 22-25 and 27-29 properly depend from claim 21. Accordingly, Applicant respectfully submits that claims 22-25 and 27-29 are patentable for at least the same reasons that claims 9 and 21, respectively, are patentable. (MPEP §2143.03 (citing *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988))). Accordingly, Applicant respectfully requests that the Examiner reconsider and remove the rejection to claims 9-13, 15-17, 21-25, and 26-29 and 18-20.



CONCLUSION

Applicant submits that all grounds for rejection have been properly traversed, accommodated, or rendered moot and that the application is now in condition for allowance. The Examiner is invited to telephone the undersigned representative if the Examiner believes that an interview might be useful for any reason.

Respectfully submitted,

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